



LivePerson's Intelligent Engagement with OpenStack

Thousands of companies like IBM, Microsoft and Virgin rely on LivePerson for "intelligent engagement" with their customers. This engagement is delivered via LivePerson's cloud-based platform that connects brands with their customers in real-time through chat, voice, and personalized content, across multiple digital properties including websites, mobile apps and social media platforms.

OpenStack® plays a critical role in LivePerson's private cloud Infrastructure, helping drive the real-time behavior analytics which are essential for producing connections based on an understanding of both a business's and a consumer's needs.

LivePerson has experienced phenomenal growth and success. Revenue has doubled since 2008, while the company manages high demands on its platform. For example, in 2012 LivePerson delivered more than 20 million chat interactions a month, generating large volumes of data across the company's digital properties.

To continue supporting the large volume of demands on its platform, LivePerson turned to OpenStack to keep information flowing and help support the growth of the company's for more compute resources.

According to Koby Holzer, DevOps group leader at LivePerson, today, 100 percent of LivePerson's services have one or more components running on OpenStack, with thousands of servers now aligned on the open source technology.

Before LivePerson started using OpenStack in 2012, the company had a small footprint of virtualization with VMware, combined with physical servers running Sun Solaris and Microsoft Windows. The migration path to OpenStack was opened first in a small footprint to QA and dev, second, was introduced to new services in production and later on a wave of adoption across LivePerson was just a natural thing to happen. Management encouraged the new spirit of innovation to use cutting edge technology, and in particular open source technologies as much as possible.

"We decided to run OpenStack to help keep costs low, provide elasticity and help scale to thousands of VMs," Holzer said. "Our immediate goals were to keep applications up and running, develop a large scale infrastructure with commodity servers and transform our infrastructure offering to a building block base."

The company began experimenting with Diablo and deployed to full production with the Essex release. Within one year, LivePerson achieved all of its stated scalability and connectivity goals. OpenStack now runs on two of LivePerson's operations layers – the Web layer for applications like Apache and IIS and the applications layer for programs like Java, JBoss and Apache Tomcat 7. On environments like staging, Alpha, QA, CI and DEV, OpenStack is also used for the DB and the Big Data applications like Hadoop, Mysql, Cassandra, Vertica, and Couch base. In fact, OpenStack is now helping to support more than 1,400 VMs over five data centers.

Achieving these goals in such a short period of time helps LivePerson advance in high-growth markets like retail, where industry analysts expect online sales to increase 10 percent each year while nearly 60 percent of Internet users express dissatisfaction with their online shopping experiences. LivePerson aims to help retailers take advantage of the growth in online sales by improving the online sales experience with live engagement solutions—and achieving its scalability and connectivity goals helps make this possible .

"Consumers who shop online want a meaningful connection—a personalized and rich customer experience ,with the company they are buying from," said Holzer. "Our platform helps companies engage customers in real-time, and provide them relevant and personalized support. The infrastructure we've developed using OpenStack helps us to create a seamless, unified customer experience across the entire shopping experience and relationship with the customer."

Also during the first year of production with OpenStack, LivePerson grew to 1,230 instances on its platform with plans to expand to 2,000 instances on more than 300 hosts. Holzer attributes much of this success to configuration management services from Puppet modules for OpenStack and for every other component Liveperson is using. Using puppet everywhere and for anything, enable us

easily enough to deploy new services on Openstack VM's and more forward to Auto scaling and simple provisioning

The Puppet modules for OpenStack provide LivePerson with scalable and reliable IT automation to OpenStack cloud deployments. These modules, which can be downloaded from Puppet Forge, work with Puppet open source or Puppet Enterprise system administrators to automate lifecycle stages of their OpenStack infrastructure. This includes provisioning OpenStack instances, configuration management, application deployment and configuration, and configuration auditing for security and compliance.

Next steps for LivePerson include a migration from Folsom to Grizzly, then to Havana. The upgrade also included a step up to Puppet 3.2.3 with use of Mcollective, Foreman, Hieradata and maybe ScalR. LivePerson also plans to add distributed storage capabilities with Puppet modules for Ceph.

Holzer offers this advice to other companies considering OpenStack. "P2V (private to virtual) everything you can," he said. "Virtualize everything. Use virtual servers. Don't buy physical servers, especially for OpenStack. Start with what you have and then add more memory and whatever new applications might be introduced, take it and put it into the cluster. Don't be shy."

Liveperson

<http://www.liveperson.com/>

Industry: Information Technology

Headquarters: NY

Size: 501 to 1,000 employees

OpenStack technologies Liveperson uses:

Openstack Compute (Nova)
Openstack Block Storage (Cinder)
Openstack Object Storage (Swift)
Openstack Network
Openstack Dashboard (Horizon)
Openstack Identity Service (Keystone)
Openstack Image Service (Glance)
Heat

Links About Liveperson

 [Liveperson Openstack usage case study](http://www.slideshare.net/openstackil/koby-holzer-live-personopenstackstory)
(<http://www.slideshare.net/openstackil/koby-holzer-live-personopenstackstory>) - From 0 to 100% in 1 year